SEQUENCE LISTING

<110> Abbott Laboratories
Davidson, Donald J.

<120> NOVEL ANTIANGIOGENIC PEPTIDES,
POLYNUCLEOTIDES ENCODING SAME AND METHODS FOR INHIBITING
ANGIOGENESIS

<130> 5940.US.P3

<140> 08/924,287
<141> 1997-09-05

<150> US 08/851,350
<151> 1997-05-05

<150> US 08/832,087
<151> 1997-04-03

<150> US 08/643,219
<151> 1996-05-03

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<170> FastSEQ for Windows Version 4.0

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<211> 791
<212> PRT
<213> Homo sapiens

<400> 1

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Lys Cys Glu Glu Asp Glu Glu Phe Thr Cys Arg Ala Phe Gln Tyr His
        35                  40                  45
Ser Lys Glu Gln Gln Cys Val Ile Met Ala Glu Asn Arg Lys Ser Ser
    50                  55                  60
Ile Ile Ile Arg Met Arg Asp Val Val Leu Phe Glu Lys Lys Val Tyr
65                  70                  75                  80
Leu Ser Glu Cys Lys Thr Gly Asn Gly Lys Asn Tyr Arg Gly Thr Met
                85                  90                  95
Ser Lys Thr Lys Asn Gly Ile Thr Cys Gln Lys Trp Ser Ser Thr Ser
            100                 105                 110
Pro His Arg Pro Arg Phe Ser Pro Ala Thr His Pro Ser Glu Gly Leu
        115                 120                 125
Glu Glu Asn Tyr Cys Arg Asn Pro Asp Asn Asp Pro Gln Gly Pro Trp
    130                 135                 140
Cys Tyr Thr Thr Asp Pro Glu Lys Arg Tyr Asp Tyr Cys Asp Ile Leu
145                 150                 155                 160
Glu Cys Glu Glu Glu Cys Met His Cys Ser Gly Glu Asn Tyr Asp Gly
                165                 170                 175
Lys Ile Ser Lys Thr Met Ser Gly Leu Glu Cys Gln Ala Trp Asp Ser
            180                 185                 190
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Gln Ser Pro His Ala His Gly Tyr Ile Pro Ser Lys Phe Pro Asn Lys
195 200 205
Asn Leu Lys Lys Asn Tyr Cys Arg Asn Pro Asp Arg Glu Leu Arg Pro
210 215 220
Trp Cys Phe Thr Thr Asp Pro Asn Lys Arg Trp Glu Leu Cys Asp Ile
225 230 235 240
Pro Arg Cys Thr Thr Pro Pro Pro Ser Ser Gly Pro Thr Tyr Gln Cys
245 250 255
Leu Lys Gly Thr Gly Glu Asn Tyr Arg Gly Asn Val Ala Val Thr Val
260 265 270
Ser Gly His Thr Cys Gln His Trp Ser Ala Gln Thr Pro His Thr His
275 280 285
Asn Arg Thr Pro Glu Asn Phe Pro Cys Lys Asn Leu Asp Glu Asn Tyr
290 295 300
Cys Arg Asn Pro Asp Gly Lys Arg Ala Pro Trp Cys His Thr Thr Asn
305 310 315 320
Ser Gln Val Arg Trp Glu Tyr Cys Lys Ile Pro Ser Cys Asp Ser Ser
325 330 335
Pro Val Ser Thr Glu Gln Leu Ala Pro Thr Ala Pro Pro Glu Leu Thr
340 345 350
Pro Val Val Gln Asp Cys Tyr His Gly Asp Gly Gln Ser Tyr Arg Gly
355 360 365
Thr Ser Ser Thr Thr Thr Thr Gly Lys Lys Cys Gln Ser Trp Ser Ser
370 375 380
Met Thr Pro His Arg His Gln Lys Thr Pro Glu Asn Tyr Pro Asn Ala
385 390 395 400
Gly Leu Thr Met Asn Tyr Cys Arg Asn Pro Asp Ala Asp Lys Gly Pro
405 410 415
Trp Cys Phe Thr Thr Asp Pro Ser Val Arg Trp Glu Tyr Cys Asn Leu
420 425 430
Lys Lys Cys Ser Gly Thr Glu Ala Ser Val Val Ala Pro Pro Pro Val
435 440 445
Val Leu Leu Pro Asp Val Glu Thr Pro Ser Glu Glu Asp Cys Met Phe
450 455 460
Gly Asn Gly Lys Gly Tyr Arg Gly Lys Arg Ala Thr Thr Val Thr Gly
465 470 475 480
Thr Pro Cys Gln Asp Trp Ala Ala Gln Glu Pro His Arg His Ser Ile
485 490 495
Phe Thr Pro Glu Thr Asn Pro Arg Ala Gly Leu Glu Lys Asn Tyr Cys
500 505 510
Arg Asn Pro Asp Gly Asp Val Gly Gly Pro Trp Cys Tyr Thr Thr Asn
515 520 525
Pro Arg Lys Leu Tyr Asp Tyr Cys Asp Val Pro Gln Cys Ala Ala Pro
530 535 540
Ser Phe Asp Cys Gly Lys Pro Gln Val Glu Pro Lys Lys Cys Pro Gly
545 550 555 560
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565 570 575
Val Ser Leu Arg Thr Arg Phe Gly Met His Phe Cys Gly Gly Thr Leu
580 585 590
Ile Ser Pro Glu Trp Val Leu Thr Ala Ala His Cys Leu Glu Lys Ser
595 600 605
Pro Arg Pro Ser Ser Tyr Lys Val Ile Leu Gly Ala His Gln Glu Val
610 615 620
Asn Leu Glu Pro His Val Gln Glu Ile Glu Val Ser Arg Leu Phe Leu
625 630 635 640
Glu Pro Thr Arg Lys Asp Ile Ala Leu Leu Lys Leu Ser Ser Pro Ala
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Val Ile Thr Asp Lys Val Ile Pro Ala Cys Leu Pro Ser Pro Asn Tyr
660 665 670
Val Val Ala Asp Arg Thr Glu Cys Phe Ile Thr Gly Trp Gly Glu Thr
675 680 685
Gln Gly Thr Phe Gly Ala Gly Leu Leu Lys Glu Ala Gln Leu Pro Val
690 695 700
Ile Glu Asn Lys Val Cys Asn Arg Tyr Glu Phe Leu Asn Gly Arg Val
705 710 715 720
Gln Ser Thr Glu Leu Cys Ala Gly His Leu Ala Gly Gly Thr Asp Ser
725 730 735
Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Phe Glu Lys Asp Lys
740 745 750
Tyr Ile Leu Gln Gly Val Thr Ser Trp Gly Leu Gly Cys Ala Arg Pro
755 760 765
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<210> 2
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Amplification Primer

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<210> 3
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Amplification Primer

<400> 3
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<210> 4
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Amplification Primer

<400> 4
attaatctcg aggcatgctt aggccgcaca ctgatggaca
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<210> 5
<211> 41
<212> DNA

<213> Artificial Sequence

<220>
<223> PCR Amplification Primer

<400> 5
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<210> 6
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic K5 Peptide

<221> VARIANT
<222> (5)...(5)
<223> Xaa = 3-I-Tyr at position 5

<400> 6
Pro Arg Lys Leu Xaa Asp Tyr
 1   5

<210> 7
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward Primer

<400> 7
gaaacttcca aaagtcgcca ta
22

<210> 8
<211> 92
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse Primer

<400> 8
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taactggctg agcgaagaca gattgcaaag ta
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<210> 9
<211> 111
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic leader sequence encodes a PHO1 secretion

signal

<400> 9
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ttcgctcagc cagttatctg cactaccgtt ggttccgctg ccgagggatc c
111

<210> 10
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Amplification Primer

<400> 10
gtccaggact gctaccat
18

<210> 11
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Amplification Primer

<400> 11
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19

<210> 12
<211> 2497
<212> DNA
<213> Homo sapiens

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ggaagtggtt cttctacttc ttttatttct gaaatcaggt caaggagagc ctctggatga
120
ctatgtgaat acccaggggg cttcactgtt cagtgtcact aagaagcagc tgggagcagg
180
aagtatagaa gaatgtgcag caaaatgtga ggaggacgaa gaattcacct gcagggcatt
240
ccaatatcac agtaaagagc aacaatgtgt gataatggct gaaaacagga agtcctccat
300
aatcattagg atgagagatg tagttttatt tgaaaagaaa gtgtatctct cagagtgcaa
360
gactgggaat ggaaagaact acagagggac gatgtccaaa acaaaaaatg gcatcacctg
420
tcaaaaatgg agttccactt ctccccacag acctagattc tcacctgcta cacacccctc
480
agagggactg gaggagaact actgcaggaa tccagacaac gatccgcagg ggccctggtg
540
ctatactact gatccagaaa agagatatga ctactgcgac attcttgagt gtgaagagga
600

atgtatgcat tgcagtggag aaaactatga cggcaaaatt tccaagacca tgtctggact
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720
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1380
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1440
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2100
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2340

ggtttgcttc gagaaggaca aatacatttt acaaggagtc acttcttggg gtcttggctg
2400
tgcacgcccc aataagcctg gtgtctatgt tcgtgtttca aggtttgtta cttggattga
2460
gggagtgatg agaaataatt aattggacgg gagacag
2497

<210> 13
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Amplification Primer

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23

<210> 14
<211> 128
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic DNA Fragment synVB1

<400> 14
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ccttaattaa ccgggagccc gcctaatgag cgggcttttt tttgctcttc atagtgactg
120
agacgtcg
128

<210> 15
<211> 175
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic DNA Fragment synVB2

<400> 15
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agctgaagag ctggctcacc ttcgggtggg cctttctgcg ccttggcgcg ccaaccttaa
120
ttaaccggga gcccgcctaa tgagcgggct ttttttgct cttcacgaga cgtcg
175

<210> 16
<211> 156
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic DNA Fragment synVB3

<400> 16
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ccttcgggtg ggcctttctg cgccttggcg cgccaacctt aattaaccgg gagcccgcct
120
aatgagcggg cttttttttg ctcttcacga gacgtc
156

<210> 17
<211> 172
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic DNA Fragment synVB4

<400> 17
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tgaagagctg gctcaccttc gggtgggcct ttctgcgcct tggcgcgcca accttaatta
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accgggagcc cgcctaatga gcgggctttt ttttgctctt cacgagacgt cg
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<210> 18
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic K5 Peptide

<221> VARIANT
<222> (7)...(7)
<223> Xaa = 3-I-Tyr at position 7

<400> 18
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 1   5

<210> 19
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA Fragment

<400> 19
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12

<210> 20
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> DNA Fragment

<400> 20
gatcgctctt ca
12

<210> 21
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward Vector Primer

<400> 21
agatctcgat cccgcgaa
18

<210> 22
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse Vector Primer

<400> 22
atccggatat agttcctc
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<210> 23
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Cassette Primer

<400> 23
cgggcttttt tttgctcttc a
21

<210> 24
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Ubi-5p Primer

<400> 24
cagattttcg tcaagactt
19

<210> 25
<211> 18
<212> DNA

<213> Artificial Sequence

<220>
<223> Ubi-3p Primer

<400> 25
accacctctt agccttag
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<210> 26
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> pET3p-ATG Primer

<400> 26
catggtatat ctccttctt
19

<210> 27
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> T7RevTerm Primer

<400> 27
tgagcaataa ctagcataac
20

<210> 28
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> pET5p Primer

<400> 28
agatctcgat cccgcgaa
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<210> 29
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Strom-3p Primer

<400> 29
ttaggtctca ggggagt
17

<210> 30

<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Strom-5p Primer

<400> 30
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<210> 31
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Ek-Cut-5p Primer

<400> 31
agcggcgacg acgacgacaa g
21

<210> 32
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Ek-Cut-3p Primer

<400> 32
cttgtcgtcg tcgtcgccgc t
21

<210> 33
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 33
tgaagagcaa aaaaaagccc g
21

<210> 34
<211> 101
<212> PRT
<213> Homo sapiens

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20 25 30
Ala Thr Thr Val Thr Gly Thr Pro Cys Gln Asp Trp Ala Ala Gln Glu

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        35                  40                  45
Pro His Arg His Ser Ile Phe Thr Pro Glu Thr Asn Pro Arg Ala Gly
    50                  55                  60
Leu Glu Lys Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Gly Gly Pro
65                  70                  75                  80
Trp Cys Tyr Thr Thr Asn Pro Arg Lys Leu Tyr Asp Tyr Cys Asp Val
                85                  90                  95
Pro Gln Cys Ala Ala
            100

<210> 35
<211> 102
<212> PRT
<213> Mus musculus

<400> 35
Val Glu Leu Pro Thr Val Ser Gln Glu Pro Ser Gly Pro Ser Asp Ser
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            20                  25                  30
Ala Val Thr Ala Ala Gly Thr Pro Cys Gln Gly Trp Ala Ala Gln Glu
        35                  40                  45
Pro His Arg His Ser Ile Phe Thr Pro Gln Thr Asn Pro Arg Ala Gly
    50                  55                  60
Leu Glu Lys Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Asn Gly Pro
65                  70                  75                  80
Trp Cys Tyr Thr Thr Asn Pro Arg Lys Leu Tyr Asp Tyr Cys Asp Ile
                85                  90                  95
Pro Leu Cys Ala Ser Ala
            100

<210> 36
<211> 101
<212> PRT
<213> Macaca mulatta

<400> 36
Ala Ala Pro Pro Pro Val Ala Gln Leu Pro Asp Ala Glu Thr Pro Ser
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Glu Glu Asp Cys Met Phe Gly Asn Gly Lys Gly Tyr Arg Gly Lys Lys
            20                  25                  30
Ala Thr Thr Val Thr Gly Thr Pro Cys Gln Glu Trp Ala Ala Gln Glu
        35                  40                  45
Pro His Ser His Arg Ile Phe Thr Pro Glu Thr Asn Pro Arg Ala Gly
    50                  55                  60
Leu Glu Lys Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Gly Gly Pro
65                  70                  75                  80
Trp Cys Tyr Thr Thr Asn Pro Arg Lys Leu Phe Asp Tyr Cys Asp Val
                85                  90                  95
Pro Gln Cys Ala Ala
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<210> 37
<211> 97
<212> PRT
<213> Bos taurus

<400> 37
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35 40 45
His Ser Ile Phe Thr Pro Glu Thr Asn Pro Gln Ser Gly Leu Glu Arg
50 55 60
Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Asn Gly Pro Trp Cys Tyr
65 70 75 80
Thr Met Asn Pro Arg Lys Leu Phe Asp Tyr Cys Asp Val Pro Gln Cys
85 90 95
Glu

<210> 38
<211> 100
<212> PRT
<213> Sus scrofa

<400> 38
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Glu Asp Cys Met Phe Gly Asn Gly Lys Arg Tyr Arg Gly Lys Arg Ala
20 25 30
Thr Thr Val Ala Gly Val Pro Cys Gln Glu Trp Ala Ala Gln Glu Pro
35 40 45
His Arg His Ser Ile Phe Thr Pro Glu Thr Asn Pro Arg Ala Gly Leu
50 55 60
Glu Lys Asn Tyr Cys Arg Asn Pro Asp Gly Asp Asp Asn Gly Pro Trp
65 70 75 80
Cys Tyr Thr Thr Asn Pro Gln Lys Leu Phe Asp Tyr Cys Asp Val Pro
85 90 95
Gln Cys Val Thr
100

<210> 39
<211> 7
<212> PRT
<213> Homo sapiens

<400> 39
Pro Glu Lys Arg Tyr Asp Tyr
1 5

<210> 40
<211> 31
<212> PRT
<213> Homo sapiens

<400> 40
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Glu Thr Pro Glu Thr Asn Pro Arg Ala Gly Leu Glu Lys Asn Tyr
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